



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D161A **After-the-Fact**
Plant ID No.: 045-00150
Applicant: Hampden Coal, LLC
Facility Name: Washington No. 2 Gas Screening Facility
Location: Amherstdale, Logan County, WV
SIC Codes: 1222 (Bituminous Coal & Lignite - Underground)
NAICS Codes: 212112 (Bituminous Coal Underground Mining)
Application Type: Construction
Received Date: April 3, 2017
Engineer Assigned: Dan Roberts
Fee Amount: \$1,500
Date Received: April 3, 2017
Applicant's Ad Date: March 29, 2017
Newspaper: *Logan Banner*
Complete Date: May 3, 2017
UTM's: Easting: 431.6148 km Northing: 4179.6865 km NAD83 Zone 17N
Lat/Lon Coordinates: Latitude: 37.761944 Longitude: -81.776389 NAD83
Description: **After-the-Fact** application to construct a 600 TPH and 5,256,000 TPY raw coal screening facility consisting of one screen, six belt conveyors and two open storage piles.

BACKGROUND

In April of 2015, Hampden Coal, LLC began their mining operations and trucking of coal from the deep mine to their Donaldson Branch Prep Plant (formerly the Mingo #1 Prep Plant) facility (059-00024, G10-D125) near Gilbert, WV. On July 7, 2015, the screening operation was constructed/began operation and consists of six belt conveyors, one vibrating screen and two open storage piles.

On October 20, 2015, the DAQ received application G10-D161 for the construction of a 450 TPH and 3,492,000 TPY raw coal screening facility prepared by Heritage Technical Associates. On February 27, 2017, the DAQ received a letter from the applicant requesting to withdraw application G10-D161 in order to make revisions and resubmit it within a short amount of time. On March 1, 2017, the DAQ sent a letter acknowledging the withdrawal of application G10-D161.

On May 4, 2017, Hampden Coal, LLC also submitted application G10-D165A for the proposed construction of another raw coal screening plant on their Kuhn Ridge Surface Mine to be located on the other side of the mountain, but still on their contiguous property. This facility will be called the Muddy Bridge Screening Facility.

Hampden Coal, LLC's proposed raw coal screening plant (G10-D161A) and additional proposed raw coal screening plant (G10-D165A) will meet the definition of "Building, Structure, Facility, or Installation" in 45CSR14.2.10 and "Major Source" in 45CSR30.2.26 and shall be considered as one facility for determining applicability to 45CSR14 (PSD) and 45CSR30 (Title V). Therefore, Hampden Coal, LLC's proposed raw coal screening plant (G10-D161A) and additional proposed raw coal screening plant (G10-D165A) shall share a common facility ID No. of 045-00150 and their potential emissions shall be combined when determining applicability.

DESCRIPTION OF PROCESS

Raw coal will exit the deep mine on belt conveyor BC-01(FE) and transfer to the screen feed conveyor BC-02(PE) @ TP-01(TC-PE) and transfer to the Allis Chalmers Vibrating Screen SS-01(FE) @ TP-02(TC-FE). Screened raw coal will transfer from the screen to conveyor BC-03(PE) @ TP-03(TC-FE); to conveyor BC-04(PE) @ TP-04(TC-PE); and to raw coal stockpile OS-01(SW-WS) @ TP-05(TC-MDH). Raw coal will then be loaded to truck for delivery @ TP-06(LO-MDH). Rock material or screen reject will transfer from the screen SS-01 on belt conveyor BC-05(PE) @ TP-07(TC-FE); to belt conveyor BC-06(PE) @ TP-08(TC-PE); to stockpile OS-02(SW-WS) @ TP-09(TC-MDH); and to truck for delivery @ TP-10(LO-MDH).

The facility shall be constructed and operated in accordance with the following equipment and control device information taken from registration application G10-D161A and any amendments thereto:

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Emission Unit Description	Maximum Permitted Throughput		Control Device ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID No.	Control Device ³
Raw Coal Screening Plant									
BC-01	C 2015	5 and 8	Belt Conveyor - receives raw coal from the deep mine and transfers it to BC-02	600	5,256,000	FE	B A	N/A TP-01	N/A TC-PE
BC-02	C 2015	5 and 8	Belt Conveyor - receives the raw coal from BC-01 and transfers it onto SS-01	600	5,256,000	PE	B A	TP-01 TP-02	TC-PE TC-FE

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Emission Unit Description	Maximum Permitted Throughput		Control Device ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID No.	Control Device ³
SS-01	C 2015	5 and 8	Single Deck Screen - receives raw coal from BC-02, sizes it and the <4" raw coal drops onto BC-03 while the >4" rock drops onto BC-05	600	5,256,000	FE	B A A	TP-02 TP-03 TP-07	TC-FE TC-FE TC-FE
BC-03	C 2015	5 and 8	Belt Conveyor - receives the <4" sized raw coal from SS-01 and transfers it to BC-04	600	3,504,000	PE	B A	TP-03 TP-04	TC-FE TC-PE
BC-04	C 2015	5 and 8	Belt Conveyor - receives the <4" sized raw coal from BC-03 and transfers it onto OS-01	600	3,504,000	PE	B A	TP-04 TP-05	TC-PE TC-MDH
OS-01	C 2015	5 and 8	Sized Raw Coal Open Storage Pile - maximum 10,000 tons capacity, 18,869 ft ² base area and 25' height - receives <4" sized raw coal from BC-04, stores it and then a front-end loader transfers it to trucks for shipment. Management of storage pile volume will be used to minimize drop height to less than 20'.	600	3,504,000	WS	B A	TP-05 TP-06	TC-MDH LO-MDH
BC-05	C 2015	5 and 8	Belt Conveyor - receives the >4" screen reject refuse from SS-01 and transfers it to BC-06	600	1,752,000	PE	B A	TP-07 TP-08	TC-FE TC-PE
BC-06	C 2015	5 and 8	Belt Conveyor - receives the >4" screen reject refuse from BC-05 and transfers it onto OS-02	600	1,752,000	PE	B A	TP-08 TP-09	TC-PE TC-MDH
OS-02	C 2015	5 and 8	Sized Raw Coal Open Storage Pile - maximum 5,000 tons capacity, 8,869 ft ² base area and 25' height - receives >4" screen reject refuse from BC-06, stores it and then a front-end loader transfers it to trucks for shipment	600	1,752,000	WS	B A	TP-09 TP-10	TC-MDH LO-MDH

¹ In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

² All registered affected facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

³ Control Device Abbreviations: FE - Full Enclosure; FE, WS - Full Enclosure with Water Sprays; PE - Partial Enclosure; PE, WS - Partial Enclosure with Water Sprays; WS - Water Sprays; MDH - Minimize Drop Height; and NC - No Control.

DESCRIPTION OF FUGITIVE EMISSIONS (taken directly from the application)

Potential sources of fugitive particulate emissions for this facility include emissions, which are not captured by pollution control equipment and emissions from open stockpiles and vehicular traffic on unpaved haulroads and unpaved work areas. The haulroads and work areas will be controlled by water truck in accordance with section E.6.c.i. of the General Permit.

The water trucks are equipped with pumps sufficient to maintain haulroads and work areas. The water trucks will be operated three times daily, and more as needed in dry periods.

An additive to prevent freezing will be utilized in the winter months when freezing conditions are present

SITE INSPECTION

On April 17, 2015, the writer and Fred Teel of the DAQ's Compliance and Enforcement Section performed an unannounced site inspection. We arrived at the guard house at approximately 10:30 am and signed in. We then proceeded to the mining office where we found out that all of the foremen were currently underground. The temperature was approximately 65°F and it began to rain lightly while we were there. The facility was in operation at the time of the inspection and raw coal was being conveyed from the deep mine, screened and raw coal and refuse were being deposited into their respective open storage piles. The mine is currently utilizing three shifts and operating 24/7. The screen was fully enclosed and the raw coal appeared to be wet and there were no fugitive emissions observed during the conveying, screening or stockpiling. There was a large quantity of raw coal in the open storage pile area and it extended up to the bottom of the stacking conveyor and over to the edge of the access road to the mining office. However, the writer and Mr. Teel were not sure how to estimate how many tons were in the raw coal open storage pile and no one was in the office to ask.

During the inspection, we observed 14 18-wheeled trucks (front end loader would load 4 heaping scoops) and nine 12-14-wheeled dump trucks (front end loader would load 3 heaping scoops) leaving the facility loaded with raw coal. One 14-wheeled tandem axle dump truck was loaded with refuse and trucked it from the facility. And One 14-wheeled tandem axle dump truck brought a load of raw coal into the facility and dumped it onto the raw coal open storage pile. The guard at the guard shack stated that there were "Lots of trucks on site right now" trying to truck the raw coal from the facility and keep up with the mine's production. According to conditions in their Article 3 Permit No. O-5013-08, the facility is only allowed to truck on Monday through Saturday and only from 7:00 am to 10:00 pm, while suspending all truck activity in Accoville Hollow on County Route 16/1 while school buses are present. The guard stated that this adds up to a little more than two hours per weekday. The writer also reviewed the trucking reports for the first two weeks of April 2017 and found that the number of trips varied from a low of 136 to a high of 171, and averaged 151 trips per day. Over a 13 hour day of hauling (15 hours day minus two hour shutdown for buses), this would *average* almost 12 trucks per hour. J & S Trucking was observed on most of the cab doors of the trucks.

The inspection lasted for one hour and concluded at approximately 11:30 am. No violations were observed during the inspection.

Here are some notes taken during the inspection:

- When you turn off of Buffalo Creek Road/County Route 16 onto Right Fork of Buffalo Creek Road/County Route 16/1 Accoville Hollow, there are approximately 50 houses that are adjacent to the road (some 3 deep) traveling 0.8 miles to the old railroad bed spur where the guard shack is located
- The Peters's residence is approximately 0.4 miles in along County Route 16/1 on the right side of the road. The trucking company's leased lot is on the right also right before the Peter's residence. The gates were locked and the facility appeared to be idled. There was an 18-wheeler trailer parked along the fence bordering the yard and there were some old tires piled up against

the front of the garage.

- There are approximately 1.6 miles of paved haulroad from the guard shack to the truck wash
- There are approximately 1.3 miles of unpaved haulroad from the truck wash to the raw coal screening facility
- Traveling over the old railroad bed spur, there are approximately 130 houses located across the creek along County Route 16/1 which extend past the truck wash, but not all the way to the raw coal screening facility
- The screened raw coal is now trucked to the Guyandotte Mining, LLC's existing Fanco Preparation Plant (045-00050, G10-D106D) to be cleaned

Directions to the facility from Charleston are to take US-119 S and travel 52.8 miles, take the WV-73 ramp towards WV-10/Logan and travel 0.3 miles, turn left onto WV-73 and travel 2.3 miles, turn left onto Old Highway 119 and travel 0.6 miles, stay straight to go onto WV-10/Logan Blvd. and continue to follow WV-10 and travel 8.9 miles, turn left to stay on WV-10 and travel 5.2 miles, make a U-turn at State Route 80 onto WV-10 and travel approximately 0.9 miles, take the first right onto Bridge Street and travel 0.2 miles, turn left onto Main Street/County Highway-16 and travel 1.8 miles, turn left onto Buffalo Creek Road/County Highway-16 and travel 1.2 miles, turn right onto Right Fork of Buffalo Creek Road/County Highway-16/1 and travel 0.8 miles and turn off to the right onto the old railroad bed spur to the guard shack. The coal screening plant is 2.9 miles further past the guard shack.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 Fifth Edition "Compilation of Air Pollution Emission Factors", Volume 1. Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The calculations were performed by the applicant's consultant using the DAQ's G10-C Excel Emission Calculation Spreadsheet and were checked for accuracy and completeness by the writer.

The proposed construction will result in the potential to discharge controlled particulate matter emissions of 435.48 pounds per hour (lb/hour) and 1,868.53 tons per year (TPY) of particulate matter (PM), of which 126.31 lb/hour and 540.73 TPY will be particulate matter less than 10 microns in diameter (PM₁₀). Refer to the following table for a complete summary of the proposed raw coal screening plant's potential to discharge:

- Proposed Emissions - Hampden Coal, LLC Washington No. 2 Gas Screening Facility - G10-D161A	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.04	0.19	0.02	0.09
Unpaved Haulroad Emissions	370.93	1,595.29	109.48	470.87
Paved Haulroad Emissions	48.79	211.40	9.41	40.77
<i>Fugitive Emissions Total</i>	<i>419.76</i>	<i>1,806.89</i>	<i>118.91</i>	<i>511.73</i>
Point Source Emissions				
Equipment Emissions	12.00	52.56	5.64	24.70
Transfer Point Emissions	3.72	9.09	1.76	4.30
<i>Point Source Emissions Total (PTE)</i>	<i>15.72</i>	<i>61.65</i>	<i>7.40</i>	<i>29.00</i>
FACILITY EMISSIONS TOTAL				
	435.48	1,868.53	126.31	540.73

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed raw coal screening plant. The construction of Hampden Coal, LLC's proposed raw coal screening plant is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas

The proposed raw coal screening plant will be subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The construction of the proposed raw coal screening plant is subject to the requirements of 45CSR13 because it will result in a potential to discharge greater than six pounds per hour and ten tons per year of regulated air pollutant (PM and PM₁₀) and involve the construction of one screen, six belt conveyors and two open storage piles, which are defined as affected facilities and subject to 40 CFR 60 NSPS Subpart Y. The applicant has submitted an application for a construction registration. The applicant published a Class I legal advertisement in the *Logan Banner* on March 29, 2017 and submitted \$500 for the General Permit application fee and \$1,000 for the NSPS fee.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation and Processing Plants

This proposed raw coal screening plant will be subject to 40 CFR 60 Subpart Y because it will be constructed after October 24, 1974 and will process more than 200 tons of coal per day. The proposed construction will include one screen, six belt conveyors and two open storage piles, which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed construction is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal which was constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the proposed raw coal screening plant is not listed in 45CSR30 subsection 2.26.b as one of the categories of stationary sources which must include fugitive emissions (open storage piles constructed or modified on or before May 27, 2009 and haulroads) when determining whether it is a major stationary source for the purposes of § 302(j) of the Clean Air Act. The proposed raw coal screening plant's potential to emit will be 29.09 TPY for PM₁₀ (open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR30 threshold of 100 TPY of a regulated air pollutant used to define a major stationary source. Therefore, the proposed raw coal screening plant will be a nonmajor source subject to 45CSR30. The proposed raw coal screening plant will not subject to the permitting requirements of 45CSR30 and will be classified as a deferred source.

The proposed construction of Hampden Coal, LLC's raw coal screening facility is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the proposed raw coal screening plant is not one of the 100 TPY stationary sources listed under the definition of "Major Stationary Source" in subsection 2.43.a. Therefore, it must have the potential to emit 250 TPY or more of any regulated pollutant to meet the definition of a major source in subsection

2.43.b. At the end of subsection 2.4.3, this facility is not listed in Table 1 - Source Categories Which Must Include Fugitive Emissions. So, fugitive emissions (from open storage piles constructed or modified on or before May 27, 2009 and haulroads) are not included when determining major stationary source applicability. The proposed raw coal screening plant's potential to emit will be 61.84 TPY for PM (open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR14 threshold of 250 TPY for a regulated air pollutant used to define a major stationary source. Therefore, the proposed raw coal screening plant and existing wet wash coal preparation plant are not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the primary pollutants that will be emitted from this facility are PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and location of this facility and the extent of the proposed construction. This raw coal screening plant will be located in Logan County, WV, which is currently in attainment for PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter). This proposed raw coal screening plant will be a minor source as defined by 45CSR14, therefore, an air quality impact analysis is not required.

GENERAL PERMIT ELIGIBILITY

The proposed construction of this facility meets the applicability criteria (Section 2.3), siting criteria (Section 3.1) and limitations and standards (Section 5.1) as specified in General Permit G10-D.

All registered facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

MONITORING OF OPERATIONS

The coal processing and conveying equipment and storage areas should be observed to make sure that the facility is meeting the applicable visible emission standards of 40 CFR 60, Subpart Y. Visible emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008 shall not exceed 10 percent (10%) opacity as stated in 40 CFR 60.254(b). Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the maximum 10% opacity limitation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

RECOMMENDATION TO DIRECTOR

The information contained in this general permit registration application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. No comments were received during the comment period. Therefore, the granting of a General Permit G10-D registration to Hampden Coal, LLC for the construction of their proposed coal screening plant to be located near Amherstdale, Logan County, WV is hereby recommended.



Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

May 8, 2017

Date